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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,386	07/11/2003	Taketoshi Nakano	1035-460	2910
23117	7590	05/08/2006	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			SHENG, TOM V	
			ART UNIT	PAPER NUMBER
			2629	

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/617,386	NAKANO ET AL.
	Examiner Tom V. Sheng	Art Unit 2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 16 February 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3,5-8 and 10-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3,5-8 and 10-17 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/11/2005.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-8 and 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taku (JP 2000-112435) in view of De Lange (US 5,719,593).

As for display apparatus claim 5 and associated display method claim 10, Taku teaches a display apparatus (display as shown in drawing 3) comprising:

an image display section (LCD panel 1; drawing 3) for performing display of data written in the image display section (inherent), the data being held therein for a predetermined holding period (every full frame display inherently held for a duration of at least one frame time);

a full screen memory for storing therein data of at least one frame for a whole display area of the image display section (the SRAM within the X driver 5 would provide display of each frame; paragraph 42);

an image-display-section refreshing section (performed by controller 2 with signals PDY and CNT at high level during entire FRM period; see drawings 4 and 5; paragraph 31) for refreshing the data written in the image display section (even for a still picture, blank black or white display, refresh inherently has to occur at a sufficient rate in

order to maintain the display of an LCD panel);

a partial-display-area refreshing section (performed by controller 2 with signals PDY and CNT at high level for only a part of the FRM period) for refreshing data written in the partial display area (corresponds with sector display field D). See paragraphs 25-31.

Moreover, Taku teaches a control section (controller 2) for (i) causing data read out from the respective memories (from the SRAM of X driver 5), to be written into the display areas to which the data corresponds (either the entire LCD panel or only the sector display field D), and (ii) causing the partial display area to move to an predetermined position within a display screen of the image display section when a predetermined time lapses (drawing 1 or 2; the position of the sector display field D changes as each time period passes). See paragraphs 23-24.

However, Taku's display constitutes display either in normal full screen mode or partial display mode of a moving picture. Thus, Taku does not teach that the refreshing of data written in the partial display area is performed after the data is held for a period shorter than the holding period of the image display section. Taku also does not teach a partial screen memory, provided in addition to the full screen memory, for storing therein data of at least one frame for a partial display area. Furthermore, Taku does not teach the writing of a single color data as a border line, between the partial display area and the whole display area

De Lange teaches image processing for simultaneous display of both foreground and background images that may be refreshed at different rates due to the nature of the

respective images. This is beneficial as background images usually change infrequently and thus do not require as frequent update as the foreground images. Further, he teaches using a frame buffer with a random access port that facilitates simultaneous access to pixel of both foreground and background images (column 11, lines 6-31). One of ordinary skill in the art, would recognize that similarly, to provide simultaneous access, two memories could be provided with one for the background (full screen) and one for the foreground (partial screen). This is functionally equivalent to De Lange's method and is considered a variation.

Moreover, De Lange teaches using a predetermined mixing area is a border between the background and the foreground (fig. 1-2; column 6, lines 8-38). One of ordinary skill in the art, would recognize, that when the background is of one color and the foreground is of another color, the combination usually results in another color.

Therefore, in view of De Lange's display method and the understanding of one of ordinary skill in the art, it would have been obvious to modify Taku's display such that two frame buffers operating at different refresh rates are used to facilitate the display of both foreground and background images efficiently and reduce power consumption.

Moreover, it would have been obvious to use a single color for the border, as based on the respective colors of the foreground and background around the border, as this produces a smooth transition between the background and the foreground image.

As for claims 1 and 6, Taku's control section analyzed above, that updates both the content and the position of the partial display area, corresponds to claimed "control section causes data read out from the respective memories, to be written into the

display areas to which the data corresponds, and causes the partial display area to move to a predetermined position within a display screen of the image display section when a predetermined time lapses."

As for claims 2, 3, 7 and 8, the movement of the partial display area, whether line-by-line or randomly, is just a variation of Taku's method as illustrated in drawing 1.

As for claims 11 and 15, this occurs when both the background and foreground around the border are white.

As for claims 12 and 16, this occurs when both the background and foreground around the border are black.

As for claims 13 and 17, this occurs when the background and foreground around the border are of different colors.

As for claim 14, the end product being a portable telephone with the display is functionally equivalent to other end products such as a TV and subsequently does not make it a novel feature.

Response to Arguments

3. Applicant's arguments filed on 2/16/2006 have been fully considered but they are not persuasive.

The applicant argues, with respect to independent claims 5 and 10, that the mixing of the foreground image and the background image does not constitute or suggest the writing of a predetermined single color data as a border line (page 9). The Examiner disagrees since the foreground and background usually constitutes different

colors and the mixing would naturally become a third and different color. This is a predetermined color since the color of the border is determined by Taku's control section prior to being applied to the display. Moreover, being predetermined does not necessarily mean being independent from the colors of the foreground and background.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

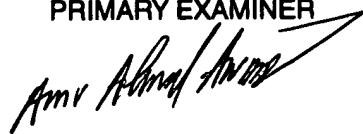
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V. Sheng whose telephone number is (571) 272-7684. The examiner can normally be reached on 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Sheng
April 21, 2006

AMR A. AWAD
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read "Amr A. Awad", is positioned below the printed title. The signature is fluid and cursive, with a diagonal line extending from the end of the last name.